Briefing materials – EPA Region 9

U.S. EPA Administrator Lisa P. Jackson California visit 11/2-11/4

WATER DIVISION:

1. San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Delta):

The Delta, the hub of California's water supply system, is formed by the confluence of the state's two largest rivers: the Sacramento flowing south from its headwaters near Mt. Shasta and the San Joaquin flowing north from its origins high in the southern Sierra Nevada. The 1100 square mile Delta is a web of 60 reclaimed islands protected by earthen levees and approximately 700 miles of waterways. The Delta watershed drains nearly 50% of the state's runoff and supports 80% of California's commercial salmon fishery. The Delta is important habitat for fish, wildlife, and waterfowl, including several threatened and endangered fish species. Pumps in the south Delta operated by the State and federal government divert 20 to 70% of natural flow to the Central Valley and Southern California, supplying a portion of the drinking water for 24 million Californians and water for more than 1,800 agricultural users who produce half the nation's fruits and vegetables. Water that is not diverted in or upstream of the Delta flows through San Francisco Bay to the Pacific Ocean. EPA has long been involved in efforts to protect and restore Delta water quality. A three-year drought (2007-2010) exacerbated perennial water supply and fishery conflicts and intensified endangered species litigation related to water project operations. These issues, plus the ongoing risks posed by levee instability, increasing urbanization, climate change and earthquakes led State and federal policy makers to again initiate new processes to "fix the Delta".

- EPA committed in the Interim Federal Action Plan to "assess the effectiveness of the current regulatory mechanisms designed to protect water quality in the Delta". In February 2011, EPA initiated this assessment through an Advanced Notice of Proposed Rulemaking. The ANPR outlined the most critical Delta water quality issues and their current regulatory framework, and solicited input on how best to address these issues. A follow-up report will be issued in early 2012 synthesizing public input and recommending priority actions.

- In 2012, Region 9 will draft new site-specific selenium water quality criteria for the San Francisco Bay and Delta reflecting the most recent science on bioaccumulation of selenium in Bay-Delta species.

- EPA is supporting the State and Regional Water Boards as they address the breadth of water quality and habitat degradation concerns in the Delta. The Water Boards have taken several key actions in the Delta, including upgrading NPDES permits and

approving TMDLs. In 2012, the State will initiate anupdateto water quality standards in the Delta to protect estuarine habitat and fish migration.

- Since 2006, the major water districts dependent on the Delta have been developing a Habitat Conservation Planning effort (the Bay Delta Conservation Plan, or BDCP) with the California Departments of Water Resources and Fish & Game, the U.S. Department of Interior (FWS and BOR) and NOAA-Fisheries to address endangered species concerns and seek water supply assurances. The BDCP will propose a controversial new conveyance facility to shift most diversions from the south Delta to the north Delta in an attempt to reverse the decline of several beneficial uses and add stability to water operations. The State and Federal agencies are preparing a DEIR/S on the BDCP; EPA is a cooperating agency and the project will require CWA 404 permits. The DEIR/S has an ambitious schedule, calling for public release in 2012 along with a major announcement by Governor Brown and Secretary Salazar in July. EPA has provided input to ensure that key water quality issues are adequately considered in the analysis of alternatives. We are also developing an MOU with the Corps of Engineers and the lead BDCP agencies integrating CWA 404 permitting steps into the overall BDCP process.

2. California No Discharge Zone:

On September 2, 2010, the U.S. EPA proposed a draft rule in the Federal Register to establish a No Discharge Zone under the Clean Water Act for vessel sewage in California marine waters, in response to a request from the California Water Resources Control Board (pursuant to a provision in the State's Clean Coast Act of 2005). The rule will prohibit both treated and currently prohibited untreated sewage discharges in State marine waters from all cruise ships, and from large oceangoing ships with available sewage holding capacity (defined in the rule as-all large oceangoing vessels that have not fully utilized available holding tank capacity or that contain sewage generated outside the NDZ, which equates to approximately 62% of large oceangoing vessels that called to California ports in 2010). The rule will be the first application of the Clean Water Act to prohibit vessel sewage discharges for an entire State's marine waters under CWA Section 312 (f)(4)(A) and for a specific class of vessels. Sewage contains pathogens, nutrients and other contaminants that can result in negative human health, environmental, and economic impacts. Although significant ocean water quality improvements have been made due to regulation of land-based municipal sewage discharges and stormwater runoff, vessel sewage has not received the same level of attention until now. Prohibiting large vessel sewage discharges will provide additional protection and improvement of California's marine water quality vital to supporting unique ecological environments, commercial and economic interests, and human health. Economic impacts to the cruise and shipping industry will be minimal while providing important water quality benefits to California's marine resources. The EPA worked with the State of California, environmental groups, and the shipping industry to address changes from the draft to final rule and as a result we determined that the final rule will provide increased environmental protection.

- In 2009 California saw at least 2.15 million cruise ship passengers and received over 12,000 cargo ship calls; numbers that are projected to grow.

- Under some circumstances, vessel sewage discharges treated by an MSD (marine sanitation device) may contain higher concentrations of pollutants than discharges of treated sewage from land-based wastewater treatment plants and may cause or contribute to water quality impairments and impacts to sensitive marine habitats.

- Of the 434 California beaches monitored in 2009, 40% experienced advisories for exceeding water quality standards for pathogens. Advisories were issued for all 50 Los Angeles County beaches, over 85% of San Francisco beaches, and 75% of San Diego beaches.

- The rule will apply along California's 1,624-mile coastline within 3 miles of shore, including major islands and tidally influenced bays estuaries and rivers.

- The rule will protect 5,222 square miles off California's coast, nearly tripling the currently protected 1,755 square miles of marine sanctuaries.

- The rule will prohibit the discharge of approximately 22.5 million gallons of treated vessel sewage (89% of the estimated 25.2 million gallons of sewage generated by the regulated class of vessels while in California marine waters each year, and 80% of the total estimated vessel sewage generation by all classes in California marine waters each year). Twenty-two million gallons per year would fill a line of tanker trucks approximately 30 miles long. The rule has been submitted to the Office of Management and Budget for review; concurrence is expected in mid-November which would allow EPA to announce a final rule in the Federal Register shortly thereafter.

3. California's Impaired Waters – 303(d) List:

Of the total 3 million acres of lakes, bays, estuaries and wetlands in the state, 1.6 million acres are not meeting water quality goals and of these 1.4 million acres still need a TMDL. Of the total 215,000 miles of rivers, streams and shoreline, 30,000 miles are not meeting water quality goals and of these 20,000 miles still need a TMDL. While more than 50% of the lakes, bays, estuaries and wetlands acres have been assessed, less than 20% of the coastline, rivers and stream miles have been assessed. California reviewed over 22,000 data sets in developing the 2008-2010 list, seven times the number reviewed for the prior list. This increase is due to a more thorough review of existing data as well as the gathering of new water quality information.

- Toxicity listings have increased 170% from 2006 to 2010. Often only certain pollutants are measured when sampling water quality to determine toxicity. However, toxicity

testing provides very useful information on whether aquatic organisms are experiencing reduced growth or survival by pollutants in a water body acting singularly or cumulatively.

- The number of bacteria listings, locations where bacteria concentrations reach levels unsafe for swimming, has increased 90% from 2006 to 2010. However, this increasing trend is likely due to a more thorough assessment of water quality data at California's fresh and saltwater beaches, rather than an increase in bacteria levels. The State's BEACH monitoring program does a thorough job of monitoring the coastal beaches most commonly used by the public and some counties are piloting rapid assessment methods to be able to more quickly assess whether bacteria levels have reached unsafe levels. In combination with recently installed electronic signs at some of the pilot locations, beach goers can be more quickly informed of beach closures due to high bacteria.

- Trash impairments have increased 76% from 2006 to 2010. The observed increasing trend is likely due to better reporting, often by the public, of trash problems in waters. Wildlife can be harmed by ingesting or becoming entangled in floating trash. California is working on a statewide Trash Policy to reduce trash impacts to local wildlife and reduce California's contribution to the Great Pacific Garbage Patch. Several cities have a ban, tax, or incentive program to reduce single-use plastic bags, Styrofoam containers, and other commonly discarded items which cannot decompose. Programs such as those, will make great improvements to reducing the problem of trash polluting lakes, river and the ocean.

- The numbers of listings showing pollutants in fish are at levels too high for safe human consumption has increased 24% from 2006 to 2010, with the greatest increases seen in mercury. The observed increasing trend is due to a recent effort to measure pollutants that bioaccumulate in sport fish in California's lakes and coastal waters. With this information California was able to issue advisories warning the public of the risks of consuming fish from certain lakes. Many of the pollutants causing impairment are no longer manufactured, such as DDT, and are slowly decreasing in concentration over time.

- Pesticides listings have increased 36% from 2006 to 2010. Much of this increase is due to more thorough monitoring required under the State's innovative Irrigated Lands Regulatory Program. This program is one of California's waiver programs that regulates nonpoint sources of pollution and is groundbreaking nationwide. It requires the agricultural community to limit pollutants in their discharges and conduct monitoring. Close collaboration between the Water Boards and the Department of Pesticide Regulation has helped to make gains in reducing pesticide discharges to surface and groundwater. As an example, along 79 miles of the Feather and Sacramento Rivers the

pesticide diazinon is no longer polluting the waterway.

4. East Bay Municipal Utilities District and Satellites – Consent Decree:

EBMUD operates a large sewage treatment plant, three wet weather treatment facilities ("WWFs") and major interceptor lines that transport sewage collected from seven East Bay contributing cities that include Oakland, Berkeley, Alameda, Albany, Piedmont, Emeryville and the Stege Sanitary District (collectively called the Satellites), and serves a total population of approximately 650,000. The wet weather discharge facilities are located at Point Isabel and at two locations on the Oakland Estuary, and were designed to contain excess sewage during storms when flows exceed the capacity of the district's main wastewater treatment plant. The excess flow is caused by storm water and groundwater leaking into the region's aging sanitary sewer pipes and through improper connections that channel storm water flow into the Satellites' sanitary sewer systems. Occasionally, these flows exceed the capacity of the WWFs, resulting in a discharge of untreated and partially treated sewage to San Francisco Bay. Over 125 million gallons were discharged during the FY11 wet weather season. In 2009, the Regional Board issued an amended permit to EBMUD which prohibits EBMUD from discharging from the WWFs. Shortly thereafter, EPA and the Regional Board reached a settlement with EBMUD that requires them to begin the studies and improvements needed to eliminate these discharges.

In a related action, the Regional Board issued amended permits to each of the Satellites prohibiting them from causing or contributing to overflows from the WWFs. EPA and the State conducted joint inspections of each Satellite's collection system to identify the actions needed to address the excess wet weather flows and to help prevent sanitary sewer overflows with their collection systems. In November, 2009, EPA issued an Administrative Order to each Satellite, which in September, 2011 were incorporated into one SO covering all seven Satellites and requiring a number of actions to make substantial improvements to their systems and to complement the work required under the EBMUD SO. Taken together, the work being done under these two SOs represents the first step in a coordinated Region-wide effort to improve the quality of the San Francisco Bay and result in a healthier environment for the communities surrounding the Bay. The major actions required under these SOs include the following:

- EBMUD is conducting region-wide flow monitoring to determine flow limit allocations from each of the Satellites, while the Satellites are conducting flow monitoring within their sub-basins to identify and prioritize areas of excess flow for sewer repair and flow reduction.

- EBMUD is implementing a Regional Private Sewer Lateral ("PSL") Program requiring replacement of private sewer laterals upon sale of property or property renovations

valued at more than $100,000, and is also required to spend at least $2 million annually in incentives to accelerate repair of these pipes. Private sewer laterals can be a significant contributor to excess flow. Each Satellite is required to work with EBMUD in the implementation of the Regional program and/or to implement a PSL program in their community which is equivalent to the EBMUD program.

- EBMUD is developing an Asset Management Program template that each Satellite will consider in developing their own Asset Management Implementation Plan, which will provide the steps that each Satellite will take to ensure that their systems are properly operated and maintained.

- Each Satellite is developing a plan to reduce inflows into their collection systems by establishing protocols to identify and eliminate areas where illicit connections to the sewer system exist and where manholes in areas prone to flooding need to be sealed.

WASTE MANAGEMENT DIVISION:

1. EPA Activity in Kettleman Hills, CA: Chemical Waste Management, Inc. (CWM) owns and operates a commercial waste treatment, storage, and disposal facility in Kettleman City, Kings County, California (KHF). CWM is seeking to modify permit approvals for expanded management of hazardous waste and PCBs at the KHF. As part of the evaluation process, Region 9 required CWM to complete a PCB congener study and risk assessment. EPA concluded that there is no evidence suggesting that PCB congeners from operations at the KHF are migrating off-site at concentrations that would adversely affect the health of local community residents or the environment.

- The community is concerned because there have been an unusual number of birth defects in recent years.

- On November 17, 2011, EPA and the California Department of Toxic Substances Control (DTSC) will be hosting a community workshop and meeting in the community. Topics include pesticides; the RCRA and TSCA permit process; the recent RCRA enforcement settlement; and birth defects in the community and drinking water. We are coordinating involvement with state and local agencies to participate in this meeting on topics that pertain to their activities in the community.

- On September 22, 2011, EPA issued a Notice of Deficiency to CWM for its TSCA Permit Renewal and Modification Application. Therefore, EPA is asking CWM to submit additional information for us to consider their application complete. The facility has 60 days from the above date to re-submit its TSCA application.

- On August 24, 2011, EPA settled with CWM requiring them to pay $400,000 and complete various injunctive tasks to resolve the violations totaling an estimated $600,000. EPA has no information that any of the violations identified during this investigation present a risk to the Kettleman City community. Community stakeholders are very interested in this enforcement action.

- On February 25, 2010, EPA issued a RCRA investigation report and Notice to CWM identifying areas of non-compliance with hazardous waste management requirements, including disposal of waste not properly treated for metals and failure to comply with federal requirements for analyzing hazardous waste at the KHF.

- On February 8, 2010, EPA Region 9 began a RCRA and TSCA investigation of the Kettleman Hills facility. The TSCA investigation discovered non-compliance with PCB handling and disposal requirements. EPA Region 9 completed a TSCA enforcement action against CWM whereby CWM paid $302,100 in penalties.

2. EPA Activity in Mecca, CA:
In December 2010 odors sickened several people at the Saul Martinez Elementary School located in Mecca, California. EPA worked for several months with the South Coast Air Quality Management District (SCAQMD) to determine the cause of these odors. EPA and SCAQMD identified one potential source as Western Environmental, located on the Cabazon Band of Mission Indians' Reservation.

- To date, EPA and SCAQMD have not had any further odor complaints. EPA will continue to work with these agencies to address odor complaints in the Mecca area.

- On August 10, 2011, EPA and Western Environmental signed an administrative order on consent that replaces the unilateral order and incorporates a work plan with an enforceable schedule to address the remaining issues.

- On May 31, 2011, EPA issued a 7003 RCRA Order to the Consolidated Tire Recyclers, Inc., a tire recycling facility located on the Cabazon Band of Mission Indians' Reservation. The order requires the operator to address fire concerns. The Tribe is also committed to addressing these concerns and on May 26th, the Tribe issued the operator a Notice of Violation and Order to Comply. EPA will continue to work with various partners to ensure the facility comes in to compliance with the EPA Order and continues to operate in an appropriate manner. The Order was issued to the operator of the facility, which is a non-tribally owned corporation.

- On May 9, 2011, EPA unilaterally issued a 7003 RCRA Order to Western Environmental to address the odor that is plaguing the community. EPA determined that the facility is a potential threat to human health and public welfare. The Order requires the facility to

immediately stop accepting certain types of waste which may be contributing to the odors and take prompt steps to mitigate possible sources of the odors.

SUPERFUND DIVISION

1. West Oakland Lead Cleanup

The West Oakland Residential Lead investigation area is comprised of six residential blocks of approximately 150 residences located adjacent to the AMCO Superfund site. Using an innovative treatment technology of ground fish bones to convert lead into a safer, less bio-available compound, and a labor pool from the surrounding community, this project is a great example of working with communities to find solutions to environmental problems. This project is attracting national attention as an innovative approach to dealing with urban lead.

- Project will address lead contaminated soil in the yards of 150 homes
- Approximately 1,000 residents live in the Project area of which about 1/3rd are children under 12 yrs of age.
- Proposed treatment remedy for the Project is projected to cost approximately 60% the cost of traditional "digging and hauling"
- The source for the calcium phosphate is from waste fish bones, harvested and processed in Alaska, and previously a waste product.
- The fish bones are ground and mixed in the soil, and as the bones degrade, the phosphate binds with lead, making the lead less toxic. This process is known as phosphate induced metals stabilization.
- Local hires trained through Brownfields job training grants
- Solar panels provide power to field office, including recharging an electric truck used onsite
- Reclaimed wastewater used in treating yards

2. Mission Bay Development Event Friday November 4

On Friday November 4, 2011, EPA, California Department of Toxic Substances Control (DTSC), City and County of San Francisco, and the San Francisco Redevelopment Agency will host a press conference at Mission Bay, the City's newest community. The event celebrates the completion of Mission Bay Drive and Circle, which connects the Mission Bay community with surrounding neighborhoods previously isolated by Interstate 280, and provides underserved residents with direct access to the Bay, new parks and open space. The project is made possible by a Brownfields stimulus grant from California's Department of Toxic Substances Control, as part of EPA's federal stimulus funding. A $760,000 DTSC stimulus grant jump-started the project. The project includes Park P16, another recently completed Mission Bay park that received a $200,000 DTSC Brownfields grant. Park P16 is the newest segment of the Mission Bay Commons Park system.

- Together the grants helped create more than 350 construction jobs.
- The projects leveraged more than $16 Million in private funding.

- Mission Bay is a successful public-private partnership development on formerly environmentally blighted, underutilized land (approximately 300 acres)

3. **Hunters Point Naval Shipyard Superfund Site**

EPA has overseen the Navy's 15-year study of Parcel E-2, a landfill, as part of the larger Superfund site. EPA and the State of CA required the Navy to take extensive soil, groundwater and airborne dust samples to understand the nature of Parcel E-2 and evaluate alternatives. 2000 soil samples, 800 groundwater samples, and 3000 soil gas and air samples were taken during the investigation of Parcel E-2. Navy released the Proposed Plan at the beginning of September, with the 45-day public comment period beginning on Sept. 7. The Navy proposes to partially remove the most highly contaminated portions of the landfill and cap the remainder with a multi-layered cap. There was a public meeting to present the Plan and preferred alternative on September 20, 2011. Navy extended the public comment period to Nov. 21. The Navy, EPA and other regulators attended a City and County of San Francisco Board of Supervisors committee hearing on October 24 to explain the Proposed Plan.

- Extensive interest from the public regarding the Navy's action and the City's plans for redevelopment around the Shipyard
- EPA agrees with the Navy's proposed preferred alternative, and both welcome comments from the community before a clean-up decision is made
- The proposed plan would allow for transfer to the City and ultimate development as a park in the future
- There is some vocal opposition to the proposed plan. Opponents express concerns about the contents of the landfill, incomplete characterization and a preference for the landfill to be excavated to an off-site location.

4. **City of Richmond Miraflores Brownfields Project**

A former Bay Area nursery site once contaminated with pesticides is being cleaned up to pave the way for new housing and open space. The project will create about 300 'green jobs' in construction and remediation in the City of Richmond. The cleanup and revitalization of the Miraflores site received a significant boost when the EPA awarded the Richmond Community Redevelopment Agency three Brownfields Clean up Grants totaling $600,000 in 2006. In addition, the agency will use funds from the EPA Brownfields Revolving Loan Fund program to help clean up the property.

- The site was owned by three Japanese American families, operated since the early 1900s, and who were interred during WWII
- Cleanup is expected to be completed in 2011.
- Housing construction should be completed by 2014 and ready for occupancy. Will be

LEED certified, with 80 homes targeted for low-income seniors, and 150 at market rate.

5. **Midway Village, Daly City**

*The Midway Village Housing Complex is a low-income housing complex in Daly City, CA and is home to over 100 families (predominantly African American and Latino). The housing complex is owned and operated by the San Mateo County Housing Authority. The housing complex was built on contaminated soils from an adjacent PG&E facility. From approximately 1906 to 1916, Pacific Gas and Electric Company's (PG&E's) Daly City gas manufacturing plant converted oil to gas to be used for lighting, heating, and cooking. As a result of the manufacturing process, coal, tar, and soot residues were left in the soil. I*n 1944, the federal government took portions of the PG&E Site and adjacent properties (including the areas which are now Bayshore Park and Midway Village) through eminent domain to construct U.S. Navy housing. The contaminated soil from the PG&E facility was used as fill material to grade the adjacent low-lying areas. Only a portion of the housing was built on top of contaminated soil. In 1976, the U.S. Navy housing was demolished and the Midway Village Housing Complex was built.

- More than 15,000 cubic yards of contaminated soil were removed from the housing area through cleanup actions from 1993-1994 and again in 2000-2002.
- Residents continued to complain of health problems, and demanded relocation and health care.
- *In January 2011, HUD approved the Section 8 relocation voucher program, and vouchers were issued to all eligible Midway Village residents in May 2011.*

6. **Richmond BUILD**

RichmondBUILD's Pre-apprenticeship Construction Skills and Green Jobs Training & Career Academy was first developed in April 2007 to create employment and career opportunities for Richmond residents and to implement a strategy for reducing violence in the community. It has quickly become a model of effective and broad public/private partnership that is focused on developing talent and skills in the high wage construction and renewable energy fields.

RichmondBUILD has received national and international recognition as an exemplary green-collar job training program. The Program won the 2008 FBI's Director's Community Leadership Award, selected as a semi-finalist for the 2009 Harvard Innovations in American Government award, and recently was awarded a Conservation Champion award by Senator Barbara Boxer. The 14-week intensive program (10 weeks which are funded by EPA) includes training in safety, first aid/CPR, power tools, framing, sheet rock, basic electrical, roofing, scaffolding, basic plumbing, basic welding, eco literacy, energy efficiency and solar installation training. To date, RichmondBUILD graduates have a 90 percent placement rate with an average wage of $18.33 an hour. The waiting list for entry is over 350 applicants long.

- In April 2010, EPA celebrated the $500,000 job training grant through Recovery Act

funds that would train 128 students and place 102 in the three-year program.

- To date, RichmondBUILD graduates have a 90 percent placement rate with an average wage of $18.33 an hour. The waiting list for entry is over 350 applicants long.

COMMUNITY AND ECOSYSTEMS DIVISION:

1. Title VI of the Civil Rights Act in Region 9:

Based on OCR's updated docket on the EPA website, 13 of the 37 open Title VI complaints are filed against recipients in Region 9. One of the oldest cases, filed in 1994, is the matter referred to as the PADRES complaint and includes allegations related to three landfills in California, most notably the Chemical Waste facility located in Kettleman City. On June 30, 2011, the Center for Race Poverty and the Environment (CRPE) filed a lawsuit against EPA for failing to complete its administrative disposition of the PADRES complaint. On October 21, 2011, a coalition of civil rights and Title VI advocacy organizations, including CRPE and Marc Brennan of the City Project in Los Angeles, sent a letter to EPA with a list of demands related to Title VI program. One of the demands is for EPA to rescind the *Angelita C.*case settlement reached between OCR and the California Department of Pesticides Regulation on August 24, 2011.

- Rafael DeLeon, Director of Office of Civil Rights, offered to continue the dialogue with Title VI activists.
- In response, the groups requested in the October 21 letter, a direct meeting with the Administrator in lieu of continued discussions with OCR, and requested the following:
  - Rescind or clarify the *Select Steel* civil rights decision and the *Angelita C. v. California Department of Pesticide Regulation* settlement agreement to ensure proper and robust enforcement of the Title VI of the Civil Rights Act.
  - Request the oversight and guidance of the Department of Justice's Federal Compliance and Coordination Section to help the EPA institutionalize complaint investigation procedures, enforcement measures, and compliance assurance tools pursuant to Title VI of the Civil Rights Act.
  - With Department of Justice oversight, respond to public comments submitted on the 2000 EPA *Revised Draft Guidance for Investigating Title VI Administrative Complaints Challenging Permits.*
  - Establish a date by which the EPA will complete its investigations and resolve all pending Title VI civil rights complaints, with the involvement of complainants and their attorneys.

Prioritize civil rights and human rights protection within the Federal Inter-Agency Work Group on Environmental Justice.

AIR DIVISION

1. California Air Resources Board Cap and Trade Program

On October 20, 2011, the California Air Resources Board (CARB) adopted their cap and trade regulations. The cap and trade program is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The

regulation will cover 360 businesses representing 600 facilities. The program is divided into two phases: the first, beginning in 2013, includes all major industrial sources and electric utilities; the second, starting in 2015, brings in distributors of transportation fuels, natural gas and other fuels.

- CARB will provide the majority of allowances to all industrial sources during the initial period (2013-2014), using a calculation that rewards the most efficient companies. Those that need additional allowances to cover their emissions can purchase them at regular quarterly auctions run by CARB, or buy them on the market. The first auctions of allowances (for 2013 allowances) are slated for August and November 2012.

- Eight percent of a company's emissions can be covered using credits from CARB-certified offset projects, promoting the development of beneficial environmental projects in uncapped sectors such as forestry and agriculture. Included in the regulation are four protocols in forestry management; urban forestry; dairy methane digesters; and the destruction of ozone-depleting substances in the U.S.

- The regulation includes rigorous oversight and enforcement provisions, and is designed so that California may link up with programs in other states or provinces within the Western Climate Initiative, including British Columbia, Ontario and Quebec.